

Center for Catalytic Hydrocarbon Functionalization T. Brent Gunnoe (University of Virginia)

The Center for Catalytic Hydrocarbon Functionalization brings together groups in catalysis, materials, electrochemistry, bioinorganic chemistry and quantum mechanics to develop new catalyst technologies for hydrocarbon functionalization

consumption while enhancing domestic

processes that can reduce energy

energy resources to fuel future

transportation processes.

Nucelar or solar energy

Fithylene and propylene for materials

CO₂ + H₂O

+ energy

Methane
Fuel Cell
based on
new catalysts
Fuel cells

Fuel cells

Depiction of examples of short and long term outcomes of one set of research projects in the CCHF.

Controlled hydrocarbon functionalization can lead to high impact technologies, but such catalysts require a level of molecular control beyond current means. The CCHF facilitates collaborations among the leading research groups to develop, validate, and optimize new methods to rearrange the bonds of hydrocarbons, implement enzymatic strategies into synthetic systems, and design optimal environments for catalysis.

